241 distributed. Wherever water is plentiful, one will find sweet potatoes; therefore there are few in the highland of the interior and only in the valley bottoms. Yams are grown very rarely. Manioc, however, which requires a certain amount of dryness and warmth is widely distributed in the lowlands and in the dry quartzite areas of the east. In the mountains of the west it is found only in the lower, warmer regions. Sorghum is found all over Urundi, although nowhere in large amounts; its main growing areas are the drier quartzite regions of eastern Urundi. Eleusine [a kind of millet] is found only in small quantities, and mostly at high altitudes. A little rice is grown [50] but only on the shores of Lake Tanganyika. It is cultivated by non-Barundi who imported it from the east; the Barundi themselves are not familiar with the cultivation of rice. Tobacco is cultivated everywhere in Urundi but merely as a form of primitive horticulture near the huts. The same is true for the castor-oil plant. Finally, the oil palm grows only on the shores of Lake Tanganyika and on the slopes of the peripheral mountains on the western side toward the lake.

Let us now take a closer look at the most important cultivated plants and at the methods of growing them.

● 245 Several varieties of banana (ikitoke) are cultivated both in Urundi and in Ruanda. Fifteen types can be distinguished in Urundi. Their flavor and the uses to which they are put differ widely. It is an open question whether there are wild varieties (musa ensete) in the mountains. In any case, out in the wild bush country I have often seen bananas which may have reverted to the wild state. According to the Barundi, their fruit is unpalatable, and they are called ikiribu. Van der Burgt has found them in northern Urundi near the mission at Mariensee. Wherever in East Africa bananas are cultivated as the main means of subsistence, a characteristic fact about their cultivation makes those tribes who plant them unusually sedentary. This fact is that the banana plant reproduces by means of runners or multiplies from shoots which cannot be taken far away, and once a banana grove has been planted around a farmstead it survives a long time. On the other hand, the fact that banana

245 cultivation requires hardly any work at all engenders laziness among those tribes who live almost entirely on bananas, as, for instance, the peoples living in the areas around Lake Victoria. Cultural progress through work is forced upon the population in this area only by their chiefs (Kahigi, Mugaráwua, and others) who are members of Hamitic Bahinda families. However, in Urundi and Ruanda the climate and topography of the area force the people to grow not only bananas but a whole series of other agricultural produce which the soil yields only after hard work with the hoe. There the limited banana cultivation cannot induce the same indolence among the people. However, when comparing the neglected banana plantations with the fields of other produce, it becomes evident that the former will thrive without much care. After the bunches of bananas have been gathered, the trunk withers yet it is left to stand there for quite a long time. The large dried leaves droop down, and weeds are removed only if they become too dense. Often no effort is made to plant young shoots, and the new striplings simply are left to grow from the rootstock. Subsequently, all of them are cut except one or two which are left for further growth. Sometimes all of them are left. For this reason the banana trees in a plantation do not grow singly, as is always the case on the coast, for instance, where reproduction and the increase in number of the plants are always effected by planting young striplings. Here, bananas grow from trunks which, in bundles of four, six, or ten, have shot from the same rootstock. Frequently, cultivated plants that are not too tall and can stand the shade are grown between the bananas such as sweet potatoes, pumpkins, beans, corn, and sorghum.

Bananas thrive best on soil which is quite moist while the plant is still growing but dry while the fruit appears and ripens. In areas where rain is plentiful, as in mountainous western Urundi, banana groves are not restricted to certain places, while in eastern Urundi with its drier climate they either nestle in the valleys so as to get sufficient water or they are found in more exposed places where water has to be piped artificially through long ducts.

[312]

245 artificially through long ducts (see p. 55). Mountainous areas at altitudes of more than 2,400 meters are too cold for bananas [51]; their growth already becomes noticeably sparse beginning at an altitude of 2,000 meters. Only a few bananas grow in the sterile quartzite areas of eastern Urundi.

Most of the fruit of the banana is cut down when it is [252] still green and unripe. The bananas are then peeled and boiled in water to make a kind of porridge, or they are [262] dried in the sun and ground into flour. Ripe fruit is eaten only in small amounts and as a delicacy since it is hard to [273] digest uncooked. For brewing beer, bananas are artificially ripened by fire in holes dug in the ground (see p. 60).

After the bundles of fruit have been cut off, the trunk withers. If necessary, it is cut down and split into small pieces which are spread at the foot of other trunks as [231] vegetable fertilizer. Chopped banana trunks are also used as fodder for young cattle. In dry areas the watery juice is squeezed from the trunks and drunk. The fibers of half-dried trunks are used for making string, rope, and plaited work, and the large dry leaves are used for roofing the huts, for wrapping various objects, etc.

244 Beans (ikiharage), next to bananas the most important means of subsistence of the Barundi, are grown in large fields all over the country. They abound in the higher or drier areas where bananas thrive with difficulty or not at all. Beans still grow quite well at altitudes between 2,000 and 2,500 meters. About 90 varieties are known: bushy, creeping, and climbing types; those which thrive in cold or in warm climates; and those bearing seeds of different size and color. They all belong to the species Phaseolus vulgaris which has probably been brought to the interlacustrine region from the west, together with the sweet potato and corn (No. 28a, p. 222). The creepers grow as tall as a man, and each plant is propped up by a sorghum stalk or a stick to which they can cling in the same manner as our [European] climbing beans. They are planted by sticking two or three beans into small holes made with a hoe.

The same technique is used for peas (uwusassja) of which

243 There are at least half a dozen different varieties of corn (ikigori). In regions where the soil can easily be irrigated, corn is often sown three times a year, and relatively large stocks of it are always kept in the granaries. The ears are cut from the stalk. As long as they are still juicy and sweet, they are either [252] eaten raw or roasted in ashes, but for the most part the ripened kernels are ground into flour and made into a kind of polenta [372] [Italian dish]. The straw is used for fuel.

244 Yams (igname), arrowroot (amateke), and sweet potatoes (ikisumbu) are planted by sticking the tubers into the ground, and a little topsoil is heaped over them. Sweet potatoes, of which there are about half a dozen varieties (No. 19, p. 424), and arrowroot need much water for the first period of growth. For this reason they are mostly grown in the valley bottoms where they can be artificially irrigated (Plate 22b). When ripe, they are dug up with a hoe in the same manner as our potatoes; the tubers or rootstocks are removed and cooked or roasted in ashes.

● 245 Manioc (umumbati), however, is cultivated by shoots which are broken off from the juicy manioc shrubs and then planted in rows with a little topsoil heaped over them. After that the plant grows without any further care. It is the most undemanding of all the cultivated plants of East Africa, and for this reason it is found all over Urundi, especially in the eastern quartzite regions. At least six varieties are distinguished, 252 none of which is so poisonous as to require cooking or fermentation in order to become palatable, as do some other varieties in East Africa. It is eaten raw, cooked, dried, ground up as flour, in the form of dumplings, etc. The leaves are boiled as a vegetable.

243 Sorghum (isakka) plays a much less important role in Urundi than in Ruanda where it ranks first among cultivated plants, even before bananas. Uha, too, produces more sorghum than anything else and supplies the Barundi with it in times of scarcity. Nevertheless, sorghum occurs in Urundi in some twenty named varieties of the white and red types (No. 19, p. 544). When sorghum is sown, the soil is simply turned over with a hoe; in most cases no furrows are drawn. The grains

423 are least fortunate or most enterprising get together to sell or exchange
[311] their plots and go to the edge of the forest to buy a piece of land or to develop the one they owned there.

From then on, the clan to which they belong includes an additional village.

As in Europe the sale and lease of fields and banana groves is made in the presence of witnesses. Land boundaries are marked with stones and other conventional signs.

A felled tree, a displaced stone, some ground which has been broken in a neighbor's field over the dividing line, such things cause frequent litigations that give rise to disunity within families and among tribes over long periods of time.

361 The Munyarwanda /sing. of Banyarwanda/ remains attached to his native village, to his plot of land. He does not feel the need to move elsewhere, to change his domicile, as do the Blacks settled east and west of Tanganyika.

[134] Ruanda soil is richer by far and sustains numerous and varied crops.

245 In addition to the banana grove, which is the most important part of his property, the Munyarwanda has begun to plant trees and to cultivate coffee, which brings in large profits to which he was not
[231] accustomed. Ownership of a small herd of cattle or sheep makes his home even dearer to him.

593 It may be said that his home life is more stable than in neighboring areas, and that he leaves it only rarely (1).

[166]

1. The Blacks, too, are familiar with nostalgia and home sickness. The fear of a vendetta or the attraction of large salaries may temporarily induce the natives to expatriate themselves. Sooner or later, however, they return to the cradle of their ancestors. The Banyarwanda cite characteristic instances of this.

241 times, but that later it was replaced by a long-handled one
412 with a hole bored at one end. They also said that at present it differs from the Ruanda hoe only in the fact that it is ligher.

The very primitive wooden hoe, less frequently used in Ruanda, is somewhat similar to the older form. It, too, consists of an unevenly forked branch, but in this case the shorter end is pointed and used as the hoe. The few samples which I saw in the region had an iron tip on the pointed end. The people I questioned about it said that formerly this tip had not
[171] been used. Later I saw identical hoes among the Niloto-Hamitic Kakwa; these were without the iron tip. I was told that they were used exclusively for clearing.

In Ruanda the women as well as the men use the hoe. In this respect Ruanda is very different from the other regions of the northwest where hoe culture is practiced.

311 There are large aggregates of tilled fields only in the north and the west and along the northern shore of Lake Mohasi. Otherwise the fields are merly oases in large sections of pasture-

[142]

Fig. 26. Wooden Hoe with Iron Tip from Mulera. (1/2 actual size. L15061.)

land and bush.

311 The banana groves usually occupy the ridges of hills; at
● 245 least this is the case in Kissaka, Nduga, and Mulera. In Bugoye and in southern Bgisha where the settlements were very high, the groves are somewhat lower. In Bugoye where the lava is very much decomposed, there are large [138] banana plantations on the lava plains themselves. In Bgisha they are somewhat higher along the edges of these plains. Bananas bear almost all year round except in the driest season. The plants are hoed, but otherwise they require little care. The banana crop is used chiefly to make beer (nzoga).

412 have a sharp, chisel-like blade (igembe) which fans out at the cutting end. Its narrower part (intereri) fits into the hole (intoboro) at the thick end (impumo) of the handle (omuhini). The bush knife is entirely forged out of iron. The upper third is wide and has one sharp cutting edge (lulimi). The upper half (isatuliro) of this third is bent like a sickle and comes to a point. The remaining two thirds is round. The lower third is driven into a wooden [140] handle (kilindi) that is slightly thicker at the lower end and reinforced above with wire or smoothly forged iron.

313 372 As a result of the extensive deforestation, the lumber shortage is a very important economic problem. In some places wood must be brought in from long distances. In the northeast where wood is hard to come by, dried cow dung is used for fuel.

● 245 197 Under the influence of Catholic missions the natives have begun to plant trees. Moreover, outside the missions' sphere of influence I saw new plantings of mussavi in Ruangeri on the road to Kisenyi, four and a half hours from Ruasa.

231 Animal Husbandry. The inhabitants of Ruanda keep cows, goats, sheep, chickens, and dogs. Stockraising plays an important role in the economic and political life. Cattle farming is almost exclusively the [141] occupation of the ruling Batutsi. Sheep and especially goats are raised chiefly by the agricultural Bahutu. It is only in Mulera and Bugoye that the Bahutu commonly have cows. The animals are cared for by the men. Out in the pasture, however, one sometimes sees a girl tending a cow or a small herd of goats.

231 554 Cattle raising is considered the most distinguished occupation a man can have. This phenomenon is explained by the superior social position of the Batutsi. "In Uganda, where cattle raising is despised, it is almost impossible to persuade a Waganda [Ganda] to go into it." (1)

[113]

1. Wilson, C. T., and Felkin, R. W., Uganda und der Ägyptische Sudan [Uganda and the Egyptian Sudan] (Stuttgart, 1883), Vol. I, p. 67.